What is claimed is:

1. Method of applying electrical stimulation to the neuromuscular tissue in the viscera, comprising:

providing an electrode attachment assembly supporting a plurality of electrode pairs thereon for attachment to the tissue such that the plurality of electrode pairs are positionable at substantially different locations thereon;

laparoscopically inserting the electrode attachment assembly through a surgical access opening in the patient;

attaching the electrode attachment assembly to the neuromuscular tissue such that the plurality of electrode pairs are spaced apart, thereby forming an electrical interface between each of the plurality of electrode pairs and the neuromuscular tissue; and

electrically stimulating the tissue in a time-varying manner with selectable individual pairs of the plurality of electrode pairs with a pulse generator.

2. Method defined in claim 1, wherein the providing an electrode attachment assembly comprises providing a first electrode attachment member configured to pass through the tissue and supporting a first electrode pair thereon and a second electrode attachment member configured to pass through the tissue and supporting a second electrode pair thereon spaced a first distance apart, and a flexible bridging portion attached to the first and second electrode attachment members and configured to allow relative positioning of the first and second electrode attachment members at differing positions on the neuromuscular tissue of the viscera of the organ structure, including the gastrointestinal tract.

3. Method defined in claim 1, wherein the providing an electrode attachment assembly comprises providing an electrode attachment member

supporting the plurality of electrode pairs on a distal surface thereon spaced substantially equidistantly apart; and

wherein the attaching the electrode attachment member to the neuromuscular tissue comprises attaching the distal surface of the electrode attachment member to the surface of the viscera, thereby forming an electrical interface between each of the first, second, third, and fourth electrodes and the neuromuscular tissue.

4. Method defined in claim 2, wherein the plurality of electrode pairs comprise a first and a second diagonally-oriented electrode pair, and wherein electrically stimulating the tissue comprises:

applying electrical stimulation across the first diagonally-oriented electrode pair during a first time period; and

independently applying electrical stimulation across the second diagonally-oriented electrode pair during a second time period.

5. Method defined in claim 4, further comprising:

applying electrical stimulation across the first diagonally-oriented electrode pair during a third time period such that the polarity of each of the electrodes comprising the first diagonally-oriented electrode pair is reversed from the polarity of the respective electrodes during the first time period; and

independently applying electrical stimulation across the second diagonally-oriented electrode pair during a fourth time period such that the polarity of each of the electrodes comprising the second diagonally-oriented electrode pair is reversed from the polarity of the respective electrodes during the second time period.

6. Method defined in claim 2, wherein the plurality of electrode pairs comprise a first, second, third and fourth adjacent electrode pairs, and wherein electrically stimulating the tissue comprises:

applying electrical stimulation across the first adjacent electrode pair during a first time period;

applying electrical stimulation across the second adjacent electrode pair during a second time period;

applying electrical stimulation across the third adjacent electrode pair during a third time period; and

applying electrical stimulation across the fourth adjacent electrode pair during a fourth time period, said first, second, third, and fourth time periods being triggered in an independent non-phased relationship to one another.

7. Apparatus for electrically stimulating neuromuscular tissue of the viscera of the organ structure, including the gastrointestinal tract by applying electrical pulses to the neuromuscular tissue, the electrical pulses supplied by a pulse generator, comprising:

first and second electrodes electrically connected with the pulse generator;

first electrode-pair attachment member having a body portion configured to penetrate through the tissue and supporting the first and second electrodes thereon spaced a first distance apart;

third and fourth electrodes electrically connected with the pulse generator;

second electrode-pair attachment member having a body portion configured to penetrate through the tissue and supporting the third and fourth electrodes thereon spaced a second distance apart;

bridging portion attached to the first and second electrode-pair attachment members and configured to allow relative positioning of the first and second electrode-pair attachment members in the tissue such that the first, second, third and fourth electrodes may be substantially equidistantly spaced apart; and

a pulse generator configured to supply electrical pulses to the first, second, third, and fourth electrodes in a time-varying manner with selectable pairs of the electrodes in an independent non-phased relationship to one another.

8. Apparatus defined in claim 7, wherein the pulse generator comprises a switching matrix responsive to a controller for applying the selectable pairs of electrodes with stimulating pulses of predetermined polarities.

9. Apparatus defined in claim 7, wherein the pulse generator is configured to apply electrical stimulation between the first diagonally-oriented electrode pair having a first polarity and the second diagonally-oriented electrode pair simultaneously having a second polarity.

10. Apparatus defined in claim 7, wherein the first, second, third, and fourth electrodes comprise a first and a second diagonally-oriented electrode pair, and wherein the pulse generator is configured to apply electrical stimulation across the first diagonally-oriented electrode pair during a first time period, and apply electrical stimulation across the second diagonally-oriented electrode pair during a second time period.

11. Apparatus defined in claim 10, wherein the pulse generator is further configured to apply electrical stimulation across the first diagonally-oriented electrode pair during a third time period such that the polarity of each of the electrodes comprising the first diagonally-oriented electrode pair is reversed from the polarity of the respective electrodes during the first time period, and apply electrical stimulation across the second diagonally-oriented electrode pair during a fourth time period such that the polarity of each of the electrodes comprising the second

diagonally-oriented electrode pair is reversed from the polarity of the respective electrodes during the second time period.

12. Apparatus defined in claim 7, wherein the first, second, third, and fourth electrodes comprise a first, second, third and fourth adjacent electrode pair, and wherein the pulse generator is configured to apply electrical stimulation across the first adjacent electrode pair during a first time period, apply electrical stimulation across the second adjacent electrode pair during a second time period, apply electrical stimulation across the third adjacent electrode pair during a third time period, and apply electrical stimulation across the fourth adjacent electrode pair during a fourth time period.

13. A method for electrically stimulating neuromuscular tissue of the viscera of the organ structure, including the gastrointestinal tract, comprising:

connecting a plurality of electrodes to at least one organ in the gastrointestinal tract of a patient along a peristaltic flow path, each of said plurality of electrodes being connected at a different location along said peristaltic flow path;

providing electrical pulses to said organ from a first set of said plurality of electrodes; and

providing second electrical pulses to said organ from a second set of said plurality of electrodes, said electrical pulses provided by said plurality of electrodes being in an independent non-phased relationship for maintaining therapeutic regulation of peristaltic flow through said at least one organ in said gastrointestinal tract while defeating the body's natural tendency for adaption.

14. The method of claim 13 comprising providing the first electrical pulses and the second electrical pulses according to a real-time clock function.

15. The method of claim 13 further comprising the step of independently regulating a pulse amplitude, a pulse timing, and a pulse duration for said electrical pulses for each one of said plurality of electrodes.

16. A gastric pacemaker for controlling the peristaltic pace of digestive organs by electrically stimulating neuromuscular tissue of the viscera of the organ structure, including the gastrointestinal tract, comprising:

a plurality of stimulation electrodes sequentially positionable on at least one digestive organ along a peristaltic flow path;

controller for controlling electrical pulse parameters for a first set of said plurality of stimulation electrodes;

said controller controlling electrical pulse parameters for a second set of said plurality of stimulation electrodes in an independent non-phased relationship according to a desired peristaltic flow; and

circuitry for providing electrical pulses to each of the first set and the second set of said plurality of stimulation electrodes in accordance with a real-time clock function.

17. A gastric pacemaker as recited in claim 16 further comprising a sensor electrode connectable to said digestive organ for sensing a response of said organ to an electrical pulse stimulation.

18. A gastric pacemaker as recited in claim 16, wherein at least one of said plurality of stimulation electrodes also functions as a sensing electrode for sensing a response of said organ to an electrical pulse.

19. A method for electrically stimulating neuromuscular tissue of the viscera of the organ structure, including the gastrointestinal tract, comprising:

connecting a plurality of electrodes to at least one organ in the gastrointestinal tract of a patient along a peristaltic flow path, each of said plurality of electrodes being connected at a different location along said peristaltic flow path;

providing electrical pulses to said organ from a first set of said plurality of electrodes; and

providing second electrical pulses to said organ from a second set of said plurality of electrodes for maintaining therapeutic regulation of peristaltic flow through said at least one organ in said gastrointestinal tract while defeating the body's natural tendency for adaption.

20. The method of claim 19, further comprising the step of providing said first and second electrical pulses according to a real-time clock function.

21. The method of claim 20, further comprising the step of providing time-of-day and date information from said real-time clock function to a programmable calendar.

22. The method of claim 20, wherein said electrical pulses provided by said plurality of electrodes are in an independent non-phased relationship.

23. The method of claim 21, wherein said electrical pulses maybe varied in accordance with said real-time clock function for enabling a stimulating waveform from said electrical pulses to vary over periods of time based on a setting of said real-time clock function.

24. The method of claim 21, wherein said real-time clock functions serve as a trigger for changing stimulation parameters on a periodic basis.

25. The method of claim 24, wherein said real-time clock functions serve as a trigger for changing stimulation parameters on a periodic basis.

26. The method of claim 25, wherein said stimulation parameter comprises a pulse width of said electrical pulses.

27. The method of claim 25, wherein said stimulation parameter comprises an amplitude of said electrical pulses.

28. The method of claim 25, wherein said stimulation parameter comprises a duty cycle of said electrical pulses.

29. The method of claim 25, wherein said stimulation parameter comprises a frequency of said electrical pulses.

30. The method of claim 25, wherein said stimulation parameter comprises a polarity of said electrical pulses.

31. The method of claim 25, wherein said stimulation parameter comprises activating and deactivating generation of said electrical pulses for a predetermined length of time.